



**Ameren Illinois Company d/b/a  
Ameren Illinois**

**MODERNIZATION ACTION PLAN  
Infrastructure Investment Program  
2012-2021**

**Attachment 3: Additional Tracking Mechanisms**

**April 1, 2016**

Table of Contents

Background..... 3

2015 Year End Information ..... 4

    ITEM #1 ..... 4

    ITEM #2 ..... 4

    ITEM #3 ..... 6

    ITEM #4 ..... 6

    ITEM #5 ..... 7

## **Background**

In addition to the tracking mechanisms as reported in the AMI update as filed with the ICC, Ameren Illinois has agreed to voluntarily report additional tracking mechanisms as proposed by the Citizens Utility Board (CUB) in conjunction with the Environmental Law & Policy Center (ELPC) and the Environmental Defense Fund (EDF). As stated, the work and activities described below are a voluntary undertaking on the part of Ameren Illinois.

Recognizing changing circumstances that may affect the propriety of tracking the subject information, or where provisions of the enabling statutes are no longer operative, Ameren Illinois reserves the right to modify, delete, or add to any of the provisions described below, and the right to terminate any or all of the undertakings.

Ameren Illinois has participated in several discussions with these stakeholders and has agreed to report the following additional items in its annual update of the Infrastructure Investment Plan.

1. The number, type, and total MW of utility owned energy storage devices connected to the Ameren Illinois electric grid.
2. The number and percentage of Transmission, High Voltage Distribution (Bulk), and Distribution substations controlled and/or monitored via Supervisory Control and Data Acquisition (SCADA) systems.
3. The number and percentage of distribution circuits (69 kV, 34 kV, 12 kV, and 4 kV) equipped with remotely controlled and/or monitored devices.
4. The number of meters per automated three phase 12 kV line segment. An automated line segment is defined as a 12 kV three phase mainline circuit between two automated devices.
5. Provide a list by major device category of the types of remotely accessible devices that Ameren Illinois has deployed or has approved for deployment on its electric distribution system, and the predominate manufacturers of these devices.

## **2015 Year End Information**

### **ITEM #1**

*- The number, type, and total MW of utility owned energy storage devices connected to the Ameren Illinois electric grid.*

#### **2015 Data Summary:**

**Ameren Illinois Company does not currently own any energy storage devices connected to our electric grid that could supply real power back to the electric grid.**

### **ITEM #2**

*- The number and percentage of Transmission, High Voltage Distribution (Bulk), and Distribution substations controlled and/or monitored via Supervisory Control and Data Acquisition (SCADA) systems.*

**Definitions:** The below definitions are meant to provide clarification as to the substation classification in regards to Item #2 tracking only. Only AIC owned station class substations will be included. Pole mounted facilities will not be included.

- **Transmission Subs** will be defined as a substation where the high voltage (HV) and low voltage (LV) sides on the same transformer(s) are above 100kV.
- **Bulk Subs** will be defined as substations where the HV side of a transformer is above 100kV and the LV side of the same transformer(s) is a high voltage distribution (HVD) level and serves >1 customer.

- **Distribution Subs** will be defined as substations where the LV side of a transformer is a primary voltage distribution (PVD) level voltage and serves >1 customer. Substations with a HVD to HVD transformation only will also be included.
- **Single Customer Subs** will be defined as any substation serving only 1 customer where Ameren owns the transformation.
- **Switching Stations** will be defined as a location where only switching activities are present, no grid related transformation present. They will fall into their own category. A Substation classification will always be treated as higher than a switching classification. For example, a feed through 138kV bus serving a 138kV/12kV transformer would be a distribution substation, not a transmission switching station.
- **Multiple Category Subs** will be defined as substations fitting two or more of the above definitions.
  - Multiple category subs will default to the higher substation in the hierarchy for the purpose of this tracking.

#### 2013-2015 Data Summary:

2013	Sub Type	Total #	# With SCADA	% With SCADA
	Transmission	31	31	100%
	Bulk	129	129	100%
	Distribution	745	358	48%
	Single Customer	247	21	9%
	Switching Station	57	55	96%
2014	Sub Type	Total #	# With SCADA	% With SCADA
	Transmission	31	31	100%
	Bulk	129	129	100%
	Distribution	739	422	57%
	Single Customer	246	22	9%
	Switching Station	57	55	96%
2015	Sub Type	Total #	# With SCADA	% With SCADA
	Transmission	31	31	100%
	Bulk	131	131	100%
	Distribution	746	468	63%
	Single Customer	248	23	9%
	Switching Station	59	56	95%

### **ITEM #3**

*- The number and percentage of distribution circuits (69 kV, 34 kV, 12 kV, and 4 kV) equipped with remotely controlled and/or monitored devices.*

**2013-2015 Data Summary:**

<b>2013</b>	<b>Distribution Type</b>	<b>Total #</b>	<b># Rem Cntrl/Mon</b>	<b>% Rem Cntrl/Mon</b>
	High Voltage	548	498	91%
	Primary Voltage	2207	1253	57%
<b>2014</b>	<b>Distribution Type</b>	<b>Total #</b>	<b># Rem Cntrl/Mon</b>	<b>% Rem Cntrl/Mon</b>
	High Voltage	542	507	94%
	Primary Voltage	2214	1433	65%
<b>2015</b>	<b>Distribution Type</b>	<b>Total #</b>	<b># Rem Cntrl/Mon</b>	<b>% Rem Cntrl/Mon</b>
	High Voltage	542	516	95%
	Primary Voltage	2224	1564	70%

### **ITEM #4**

*- The number of meters per automated three phase 12 kV line segment. An automated line segment is defined as a 12 kV three phase mainline circuit between two automated devices.*

**2012-2015 Data Summary:**

	<b>@End of Service Year Shown</b>			
	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Average # Customers Per Segment-ITR/Viper	618	564	643	602
# of ITR/Viper Segments	29	42	131	248
Total Customers in an ITR/Viper Segment	17,911	23,698	84,278	149,303

## **ITEM #5**

*- Provide a list by major device category of the types of remotely accessible devices that Ameren Illinois has deployed or has approved for deployment on its electric distribution system, and the predominate manufacturers of these devices.*

### **Definitions:**

- **Remotely accessible** is defined as a device with either remote indication and/or remote control capabilities.

### **2015 Data Summary:**

<b>Device</b>	<b>Category</b>	<b>Approved Manufacturers</b>
Remote Terminal Units	Control/Indication	L&N, Harris, GE, CDC, SEL
Automated Reclosers	Control/Indication	S&C, G&W, ABB, Sch. Elect.
Automated Switches	Control/Indication	SEECO, Southern States, Turner
Automated Cap Controls	Control/Indication	S&C, Beckwith, SEL
Automated Reg Controls	Control/Indication	SEL, Cooper
FCIs	Indication	Cooper, PDP, Telemetrics
Relays	Meter/Indication/Data	SEL
Substation Metering	Metering	SATEC
Automated Network Protectors	Control/Indication	Eaton